patients of Group B required additional VATS for intractable fever, encapsulated effusion and atelectasis.
Conclusion: VATS for fibropurulent thoracic empyema is safe and effective, without extra increased expenses. This suggest VATS as first-line therapy strategy in the management of fibropurulent thoracic empyema.

PP-023 Brucella epididymo-orchitis; rare presentation of brucellosis

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Introduction: Brucellosis is a significant public health problem particularly in developing countries. People are frequently infected through milk, milk products, urine and pregnancy material of animals with brucellosis. Epididymo-orchitis is the most frequent genitourinary complication of brucellosis and is often unilateral.
Case presentation: The patient was a 16 year-old shepherd with pain and swelling of left scrotum and testis, chills, fever and weight loss. Wright agglutination test = 1/640 and 2ME = 1/256 was positive. According to his job, history, clinical presentation and high Wright and 2ME titer brucella epididymo-orchitis was diagnosed. Streptomycin 1 g daily and Doxycyclin 100 mg twice daily was started. Pain, erythema and edema decreased dramatically after several days. Brucella epididymo-orchitis should be considered in the differential diagnosis of scrotal pathologies where Brucella is endemic.

PP-024 Recurrent pericardial effusion complicated by cardiac tamponade due to brucellosis

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Introduction: Brucellosis is a zoonosis, recognized worldwide as a serious public health hazard and economically significant disease. It is a multisystem disease that may present with a broad spectrum of clinical manifestations and complications. Pericarditis and pericardial effusion are rare complication of brucellosis.
Case Description: We presented a 40-year-old woman with recurrent pericardial effusion complicated by cardiac tamponade due to brucellois. We detected high titer of Wright and 2ME in serum and pericardial fluid. Tamponade was drained and patient was treated with rifampin, streptomycin and trimethoprim-sulfamethoxazole. Follow up echocardiography was normal. The patient discharged to home with good general condition. No complication occurred several months after discharge.

PP-025 Study of bacterial pneumonia in type 2 diabetes – clinical profile and outcome

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Objectives: To study the clinical profile and radiological and microbiological characteristics and outcome of pneumonia in patients with diabetes mellitus.
Materials and Methods: A prospective study conducted in the hospital attached to Sri Devarj Urs Medical college, kolar, which included 50 patients of pneumonia with diabetes and 50 patients in non diabetes. The clinical profile and radiological characteristics, the spectrum of causative agents, microbiological data and outcome of patients with diabetes were analyzed and compared with data obtained from non-diabetic patients.
Results: Patients with diabetes were significantly associated with multilobar involvement ($p = 0.039$), more severe at presentation in the form of PSI score ($p = 0.020$), more mortality ($p = 0.012$) and more ICU admissions. By contrast, there is no significant difference in the age, sex, concomitant illness and complications. In subgroup of patients with diabetes, mortality was associated with multilobar involvement, high PSI score ($p = 0.001$).
Conclusion: In patients with pneumonia, diabetes is associated with more severe presentation, poor prognosis and poor outcomes. This study showed that this outcome is more attributable to underlying circumstances of patients than uncommon microbiological findings.

PP-026 Enhanced discrimination of pandemic clone ST239-methicillin-resistant *Staphylococcus aureus* in a tertiary hospital in Malaysia by *mec*-associated direct repeat unit and *spa* typing

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Background: Infections caused by methicillin-resistant *Staphylococcus aureus* (MRSA) continue to be a problem. Strain differentiation of MRSA has commonly been refined by MLST and *spa* typing. The objective of this study was to explore a relatively new typing approach, i.e *mec*-associated direct repeat unit (*dru*) to improve strain discrimination.
Methods: One hundred eighty-eight MRSA isolates obtained from a tertiary hospital in Malaysia were analyzed. The strains were characterized by MLST, *spa* and *dru* typing. *dru* typing involves PCR amplification of *mec*-associated direct repeat unit, followed by DNA sequencing of the amplicon. The sequence information was then submitted to dru-typing.org for confirmation and determination of a specific *dru* type.
Results: Among the 188 isolates, 30 different *dru*, 17 *spa* and 10 MLST types were identified with discriminatory power of 0.85, 0.53 and 0.29, respectively. About 83% of the isolates were of MLST ST239. These isolates were further differentiated to 7 different *spa* types and 26 different *dru* types. One novel *spa* type (t6405) and 17 novel *dru* types were identified.
Conclusion: *mec-dru* typing is relatively cheaper, rapid and has greater discriminatory ability than MLST and *spa* typing. The data analysis was simpler and is amended for inter-laboratory comparison for strain typing.

PP-027 Rationale of azithromycin prescribing practices for enteric fever in India

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Background: Drug resistance to nalidixic acid & third generation cephalosporins in salmonella has been on rise, while a reversal of resistance pattern in favor of

chloramphenicol has been observed. Western studies have favored azithromicin as potential drug but due to lack of breakpoint concentrations in different guidelines; its invitro interpretation has often been difficult. Purpose of present study is to assess current susceptibility pattern of blood isolates of salmonella and evaluate and compare pivotal role of azithromicin as drug of choice for enteric fever in India and western countries.
Methods: 107 non-repeat blood isolates of Salmonella spp. from 2005–2008 in Microbiology Department, SGPGIMS, Lucknow, India, were subjected to susceptibility testing for chloramphenicol (30 μg), nalidixic acid (30 μg), ampicillin (10 μg), trimethoprim-sulphamethoxazole (1.25/23.75 μg), ceftriaxone (30 μg), cefepime (30 μg), ciprofloxacin (5 μg), gatifloxacin (5 μg), tetracycline (30 μg), amoxicillin-clavulanic acid (20/10 μg) and ofloxacin (5 μg) (Oxoid, Basingstoke, UK) as per Clinical and Laboratory Standards Institute (CLSI) guidelines. Breakpoint Minimum inhibitory concentration (MIC), MIC_{90} & MIC_{50} were determined against nalidixic acid, ciprofloxacin and azithromicin by E-Test® (AB Biomerieux, Solona Sweden) and interpreted according to CLSI guidelines & British Society of Antimicrobial Chemotherapy breakpoints for azithromicin.
Results: See the tables.
Conclusion: Present study had higher MIC_{90} values for azithromicin compared from western isolates thereby directing a guarded use of antibiotic for enteric fever.

Table 1. Number and distribution of the 107 *Salmonella* isolates

Species (n)	Distribution[a], n (%)				Resistance	
	NARS	NASS	ESBL	MDR	Azithromycin MIC ⩾ 16 μg/ml, n (%)	Chloramphenicol resistance, n (%)
Typhi (80)	70/80 (87.5%)	10/80 (12.5%)	Nil	4/80 (5%)	27/80 (33.75%)	5/80[b] (6.25%)
Paratyphi A (21)	21/21 (100%)	Nil	Nil	Nil	8/21 (38.09%)	Nil
Senftenberg (2)	2/2 (100%)	Nil	2/2 (100%)	Nil	1/2 (50%)	Nil
Typhimurium (3)	Nil	3/3 (100%)	Nil	Nil	Nil	Nil
Enteritidis (1)	1/1 (100%)	Nil	1/1 (100%)	Nil	Nil	Nil
Total (107)	94/107 (87.85%)	13/107 (12.14%)	3/107 (2.80%)	4/107 (3.78%)	36/107 (33.64%)	5/107 (4.67%)

[a] NARS: nalidixic acid resistant *Salmonella*; NASS: nalidixic acid sensitive *Salmonella*; ESBL: extended spectrum beta lactamase; MDR: multi drug resistant.
[b] Four were NARS.

Table 2. MIC_{90} and MIC_{50} values for three antimicrobials tested

Drug	MIC_{90} (μg/ml)	MIC_{50} (μg/ml)
Nalidixic acid	>256	>256
Azithromycin	24	12
Ciprofloxacin	0.75	0.38

PP-028 Effect of oral supplementation of zinc on treatment of otitis media with effusion

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Objective: To determine the effect of oral zinc sulfate supplementation given with coamoxiclav as compared with coamoxiclav alone for treatment of otitis media with effusion (OME). The efficacy was assessed 3 and 6 weeks after administration.
Methods: In a double-blind, randomized trial 4 to 14 years old children with OME who referred to ear, nose and throat clinic, were randomly assigned into two groups:
1. Zinc group: Zinc sulfate + Coamoxiclav + Pseudo-ephedrine + Nacl nasal drop
2. Placebo group: Placebo + Coamoxiclav + Pseudo-ephedrine + Nacl nasal drop.

Children were examined by otoscopy and tympanometry at entry and after 3 weeks of treatment. For children who had not been cured completely after 3 weeks, treatment continued for more 3 weeks (total of 6 weeks).
Results: A total of 52 children were studied consisting zinc group 29 and placebo group 23 children. At the end of the first course of treatment (3 weeks) 62.1% of children in the zinc group had clinical improvement compared with 43.5% of children in placebo group. Tympanometrically, 70.9% of children in zinc group had improvement compared with 65.5% for placebo group with no statistically significant difference.
There was no statistically difference between two groups at the end of second Course of treatment (6 weeks), too. But the response rate of zinc group was better than the placebo group (43.8% versus 12.5% clinically and 56.3% versus 40% tympanometrically). Zinc administration and cycles of treatment had not statistically significant relationship.
Conclusion: Although in this study oral zinc sulfate supplementation had not statistically effect on treatment of OME, the response rate was better in zinc group compared to placebo group specially for longer administration.
According to the findings, it seems more studies about oral zinc supplementation in the treatment of OME is needed.

PP-029 Antibiotic resistance pattern and serotype distribution of *Streptococcus agalactiae* isolated from pregnant women, Ardabil, Iran

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Background and Objectives: Group B Streptococcus (GBS) is a major cause of neonatal and maternal infections. In this study the serotype distribution and antibiotic resistance pattern of 56 GBS strains Isolated from pregnant women in Ardabil (2009) was determined.
Methods: The MIC for clindamycin, vancomycin, penicillin, ampicillin and erythromycin against isolates were determined using E-test strips according to CLSI. Serotyping was performed using capsular antiserum.
Results: According to MIC tests all isolates were susceptible to ampicillin, vancomycin and penicillin [MIC range; 0.016–0.12 μg/mL, 0.75–0.94 μg/mL and 0.064–0.016 μg/mL respectively]. 1 (1.7%) isolate showed reduced-susceptibility pattern to penicillin (MIC; 0.25 μg/mL) and 16 (28.6%) had the MIC higher than 0.25 μg/ml for vancomycin (⩽0.25 μg/ml considered as sensitive). The MIC range for erythromycin and clindamycin was 0.5–0.016 μg/ml and 16–0.016 μg/ml respectively. There were 3 (5.3%) isolates semi-sensitive (0.25–1 μg/ml) to erythromycin (2; 0.5 μg/ml and 1; 0.38 μg/ml) and 2 (3.5%) isolates to clindamycin (1; 0.5 μg/ml, 1; 0.38 μg/ml). Additionally 2 (3.5%) isolates were resistant (MIC⩾1 μg/ml) to clindamycin (1; 16 μg/ml, 1; 2 μg/ml). Serotypes V (19.6%), II (12/5%) and IV (12.5%), were the most frequent followed by serotypes III (10.7%) and VI (10.7%), Ib (8/9%), Ia (7.1%), VII (5.3%) and VIII (5.3%); 7.1% of strains were Nontypeable.
Conclusion: Most isolates were sensitive to commonly used antibiotics. The serotype V was the most frequent one in this study.